



Hood Canal Dissolved Oxygen Program Monthly Update **May 2006**

Next HCDOP meeting

- *When/where*
 - The next meeting will be held at the PSAT office in Olympia on June 13 from 12:30 pm to 3:30 pm.
- *Proposed agenda items for the next meeting*
 - DNR's Hood Canal Eelgrass Monitoring Update (Pete Dowty, DNR)
 - Algal bloom

Scientific Studies

- *Project update*
 - PSAT staff organized a two-day workshop to guide development of a scope of work for the onsite sewage nitrogen study. Larry Fay of Public Health-Seattle and King County facilitated discussion by approximately 30 participants. It was decided that the University of Washington Department of Civil and Environmental Engineering would be most able to manage the study with participation by several HCDOP partners. The interagency agreement between PSAT and UW should be in place within two weeks. (Hull, PSAT)
 - Molluscan Study Update: HCSEG submitted a final draft of the Phase I Molluscan study to Ecology. HCSEG has yet to finalize the methodology for the Phase II of the Molluscan study. HCSEG is working with a panel of scientists to finalize the scope of the study and the methodology. (Toba, DNR)
 - Mason County Department of Health Services (MCDHS) is now sampling 12 locations for dissolved oxygen and nutrients for the Hood Canal Dissolved Oxygen Program (HCDOP). We recently added a sampling location at Lake Kokanee near the intake to the penstocks that flow directly to the Hood Canal. MCDHS is now fifteen months into the freshwater monitoring component. (Mathews, MCDHS)
- *New information*
 - KING-TV crew observed a significant greenish algal bloom during a fly-over of Hood Canal on Wednesday, May 31. HCDOP Citizen's Monitoring group had taken samples on Tuesday, May 30. Samples were analyzed by Pacific Shellfish Institute (Mary Middleton, Aimee Christie) and reviewed by Dr. Rita Horner (UW). The event was identified as an euglenoid bloom (Euglenophyceae). According to Rita, euglenoids have been commonly observed in the Dabob Bay area of Hood Canal, but not in such bloom concentrations. Photos and explanatory text regarding this bloom have been posted on the HCDOP IAM website at:
http://www.hoodcanal.washington.edu/observations/bloom_fishkill.jsp
 - USGS released three reports earlier this month:

Freshwater and Saline Loads of Dissolved Inorganic Nitrogen to Hood Canal and Lynch Cove, Western Washington

Paulson, Konrad, Frans, Noble, Kendall, Josberger, Huffman, and Olsen

Surface-Water Quality in Rivers and Drainage Basins Discharging to the Southern Part of Hood Canal, Mason and Kitsap Counties, Washington, 2004

Frans, Paulson, Huffman, and Osbourne

Transport Pathways in the Lower Reaches of Hood Canal

Noble, Gartner, Paulson, Xu, Josberger, Curran

Corrective Actions

- *Project update*
 - The Hood Canal Pollution Identification and Correction Project (HCPIC) team has been working on a Quality Assurance Project Plan (QAPP) for the project and has begun updating the Standard Operating Procedures (SOPs) to support the QAPP. The team also assisted Seth Book at presentations for the Environmental Explorations and Youth Summit events, providing information on the HCPIC project and promoting Best Practices for Water Quality. To date, the team has sampled from Triton Head to Hoodspout, and Alderbrook to Hwy 106 Mile 10. They have not sampled from Hoodspout to Union as they intend to perform nutrient sampling in addition to fecal coliform sampling in this area. (Mathews, MCDHS)
 - Installation of all onsite sewage demonstration systems is complete and the final sampling event by Jefferson County Health staff will be conducted next week. Analysis of the work under the contract between PSAT and Jefferson County along with data for input into the IAM model should be available by mid-July. (Hull, PSAT)
 - Terry Hull (PSAT) met with members of State Parks' interagency oversight group to review progress on improvements to wastewater treatment systems in various Puget Sound parks. Improvements at Twanoh State Park are a top construction priority and should be started later this summer. Improvements at Potlatch, Dosewallips, Belfair, and Kitsap Memorial are in various planning stages.
 - Terry Hull (PSAT) met with HCCC and Shorebank Enterprise Pacific staff to discuss a proposed regional funding mechanism to help onsite sewage system owners obtain grants and loans to fix poorly functioning systems. (Hull, PSAT)
 - Duane Fagergren met with the HCCC staff on a process and alternative approach to forwarding a proposal for \$1M in state appropriations through the PSAT and HCCC, ultimately to be considered by the Interagency Committee on Outdoor Recreation (IAC), which serves as the fiscal agent for the funds. (Fagergren, PSAT)
 - Duane Fagergren participated in a meeting with Mason County's contractors (O'Neil, Sharar, Hoffman) and state agency partners, Ecy, DOH, CTED, in consideration to extend the Belfair sewer line beyond the UGA. (Fagergren, PSAT)
 - PSAT staff worked with interagency Hood Canal team members to prepare and present a GMAP on Hood Canal, scheduled for June 8. (Fagergren, Criss, Glasoe, Hull, Knackstedt)
 - Duane Fagergren drafted a letter on behalf of the interagency state team on Hood Canal to express our collective interest in assisting the staff and Board of

County Commissioners in Mason County in whatever way they deem most appropriate. (Fagergren, PSAT)

- Duane Fagergren presented to the Mason County League of Women Voters at their May meeting in Shelton. Senator/Commissioner Tim Sheldon, Rep. Bill Eickmeyer, HCCC director Jay Watson, and Skokomish Tribal Natural Resources director, Keith Dublanica participated on the same panel. (Fagergren, PSAT)
- Duane Fagergren and Stuart Glasoe participated in a field trip and briefing with several agencies to learn about the status of the Mason Conservation District's anaerobic digester project. (Fagergren, PSAT)

Watershed Planning

- *WRIA 16 Watershed Plan* On May 11 the Planning Unit for the Skokomish – Dosewallips watershed unanimously approved the comprehensive watershed plan developed under the Watershed Planning Act (RCW 90.82). The meeting was hosted by the Skokomish Tribe (one of the Initiating Governments), and included the singing of traditional songs of blessing and thanks. The plan will go into effect when adopted by the Jefferson and Mason Boards of County Commissioners. Copies of the plan are available at Ecology's website:
<http://www.ecy.wa.gov/apps/watersheds/planning/16.html>
(Phil Wiatrak, Ecology, SWRO)

Annas Bay Shellfish Protection District/Shellfish Downgrade

- Seth Book talked with several residents on site visits and has commenced dye testing a possible failing septic system. Seth conducted two sampling events on Annas Bay shorelines during the month of May with one sampling event immediately after the high use Memorial Day weekend. MCDHS has also continued to work with the Skokomish Tribe on mutual interests such as Annas Bay shellfish closure. Seth will be out of the office for the majority of June due to a surgery, but his coworkers at MCDHS will be able to perform his duties in the area during his absence. (Mathews, MCDHS)

Outreach

- *Public education and outreach updates*
 - HCWEN met on May 25 at the Kitsap SSWM annex. Agenda items included: Invasive Tunicate ID presentation from Mary Lou Mills, WDFW; update on the Lower Hood Canal Watershed education festival scheduled for July 22; program evaluation and the possibility of HCWEN helping to sponsor a REEF/ SeaDoc Society ID class for residents around the Canal in late summer/early fall. (Piper, HCWEN)
 - Shore Stewards and the Watershed Pledge provided an education booth for the two-day "Shrimpfest" in Brinnon over Memorial Day. Lots of new members and interest, also passed out postcards for the newsletter. (Piper, HCWEN)
 - The second Annual Hood Canal Youth Summit was on May 31 at Twanoh State Park. Funded by PSAT and hosted by Karen Lippys' Hood Canal Institute Students. Morning station presenters included: WSU Mason Extension, Mason County Health, UW Sea Grant, Arline Fullerton of the Hood Canal Divers and

- HCSEG. About 120 youth from around the Canal attended the event. Elaine Grinnel an Elder from Jamestown S'Klallam Tribe also attended. (Piper, HCWEN)
- The HCDOP Diver Observation Program (Teresa Sjostrom) is linking with efforts by PSAT (Mary Knackstedt) to provide a marine organism ID workshop. The workshop is being developed with representatives from the REEF (Reef Environmental Education Foundation) program and is being promoted by the HCWEN community.
 - A UW/Tacoma field course, which annually investigates the quality of estuaries in Puget Sound, participated as part of the HCDOP Citizen's Monitoring program. UW, HCSEG, and volunteer boat operators provided equipment, transportation and technical support as they captured all HCDOP/HCSEG Citizen Monitoring stations and some additional PRISM stations on May 12 and May 13. Dr. Cheryl Greengrove's students captured CTD casts, as well as DO discrete samples, chlorophylls, nutrients, secchi data, surface plankton, and performed a grain size analysis. For more information visit their class webpage at <http://courses.washington.edu/uwtoce05/index.html> (Renee Rose, HCSEG)
 - Jan Newton gave the UW-Applied Physics Lab departmental seminar on "Hood Canal's Low Dissolved Oxygen: Status and Controlling Factors" on June 1 at UW in Seattle. There were many in attendance, including a person on the board of People for Puget Sound, who has requested Jan to speak at their upcoming seminar series at REI.
 - Several presentations will be made at the American Society of Limnology and Oceanography meeting in Victoria on June 9 regarding Hood Canal:
 - Increasing Hypoxia in Hood Canal, Washington, USA
Newton, Warner, Hannafious, Devol, Mumford, Palsson
 - Freshwater Nutrient Loading to the Hood Canal
Osborne, Brett, Richey, Steinberg, Newton, Hannafious
 - Estimated Loads of Nitrogen to Hood Canal
Paulson, Noble, Kendall, Frans
 - High Frequency Measurements of Oxygen and Other Variables in Hood Canal, Washington
Devol, Ruef, Newton
 - Sensitivity of Fjord Exchange Circulation to River Discharge and Oceanic Conditions: Idealized Numerical Experiment and Application to Puget Sound
Leonov, Kawase
 - Microbial Community Shifts in Response to Nutrient Amendments in a Hypoxic Fjord (Hood Canal, WA)
Holtermann, Horner-Devine, Silver, Williams, Rocap, Newton, Von Dassow, Marohl, Ostund Lin, Durkin
 - Phytoplankton Community Responses to Nutrient Amendments in Hood Canal, WA
Parker, Newton, Holtermann, Von Dassow, Marohl, Hubbard, Berthiaume, Williams, Rocap, Armbrust
 - A number of state and local agencies and the Skokomish Tribe are working with the Lower Hood Canal Watershed Coalition to plan and support a "Clean Water Festival" scheduled for July 22 at the Theler Center in Belfair. The tentative schedule includes presentations on the Hood Canal Dissolved Oxygen Program, "Blue Thumb Gardening," Managing Residential Runoff, and Septic System Maintenance. Over a dozen display tables, staffed by various agencies and covering a wide range of topics, are also included in the program. (Phil Wiatrak, Ecology, SWRO)

- Duane Fagergren met with Jonathan (Joth) Davis at the Port Gamble city site, owned by Pope Resources, to discuss possible research and education facilities at this historic place. Duane and Ron Shultz (PSAT) will meet with Pope Resources representatives and contractor, Lori Evans early in June to discuss further options for Port Gamble wastewater treatment, education, research, and conference facilities (Fagergren, PSAT).
- *Public outreach needs*
 - Emily Piper and Toni Droscher are looking for contacts and locations to help distribute the Hood Canal NEWS postcards. Please contact Toni Droscher for more information: tdroscher@psat.wa.gov.
- *Upcoming meeting notices/speaking engagements*
 - June 8: Annas Bay shellfish closure update meeting: 1-3pm Mason Conservation District. Contact Seth Book at Mason Health.
 - June 22: Hood Canal Watershed Education Network meeting, 1-4pm Kitsap County SSWM Annex. (Piper, HCWEN)
 - June 28: EPA is hosting a Watershed Webcast to Cover Social Marketing In Chesapeake Bay. A case study presentation will highlight the key social marketing principles used to change behaviors in the Chesapeake Bay Watershed. Registration is available on a first-come/first-served basis and will open on June 21, 2006. For more information, please visit <http://www.epa.gov/watershedwebcasts>.
 - July 22: Lower Hood Canal CLEAN WATER FESTIVAL, Theler Center.

Communications

- *Communications activities*
 - Dan Hannafious and Jan Newton provided review comments to John Williams' second draft of a video on Hood Canal hypoxia.
- *Media contacts or requests*
 - Contacted by Sandi Doughton, Seattle Times, about USGS's recently-released reports on Hood Canal. (Fagergren, PSAT)
- *Media coverage*
 - A bloom event near Lilliwaup was observed from a KING5-TV news helicopter on Wednesday, May 31, and reported on the evening news in a story by Gary Chittim. The images of the bloom were incorporated into a news report regarding water quality issues surrounding Quartermaster Harbor on Vashon Island. The news report inaccurately linked the two events (toxic algae in Quartermaster Harbor but not in Hood Canal) and misquoted the high chlorophyll evident at the southern ORCA since February as being a year-long "green monster" bloom. See: <http://www.king5.com/localnews/environment/> (Toxic algae bloom spreads in Puget Sound). (Newton, UW/Hannafious, HCSEG)
 - *Eating Well to Save the Sound*, Washington State Magazine: <http://washington-state-magazine.wsu.edu/stories/2006/May/eatingwell.html>